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TROXELL LAW OFFICE PLLC  
SUITE 1404  
5205 LEESBURG PIKE  
FALLS CHURCH, VA 22041

EXAMINER
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THOMAS, MIA M

ART UNIT	PAPER NUMBER
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2609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/815,819

**Applicant(s)**

CHEN, MING-JANG

**Examiner**

Mia M. Thomas

**Art Unit**

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 1,3,12,17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### **Priority**

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

#### Summary of the Invention

[0012] "... where a pattern is directly used as the ~~bases~~ basis for generating pictures, by identifying the relative relationship between the pattern and baseline, and then duplicating ~~duplications~~ patterns or duplications of the pattern along the targeted line segment with identical ~~relationship~~ relationships by means of iterative duplication(s), in which similarity and analog ~~relationship~~ relationships exist between the duplications and the patterns, additionally, to obtain ~~an~~ a picture containing large-scaled drawings of similar objects after being subject to multiple duplications."

[0013] "...inputting a pattern, a baseline, and a targeted line segment at a first, a second and a third ~~positions~~ position , respectively, by an end-user, the pattern, baseline and targeted line segment having a first, a second, and a third ~~dimensions~~ dimension and a first, a second, and a third ~~azimuths~~ azimuth, respectively..."

[0030] “These and other modifications and advantages will become even more apparent from the following ~~detained~~ detailed description of a preferred embodiment of the invention and from the drawings ~~in which~~:

***Detained*** by definition means to keep from proceeding, delay or retard ; to keep in custody or temporary confinement. It is suggested that applicant choose another adjective to describe the preferred embodiment referred to in paragraph [0030]. Suggested adjectives include detailed, comprehensive.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 1 and 3 are objected to because of the following informalities:

**Regarding claim 1(a)** “... inputting a pattern, a baseline, and a line segment at a first, a second and a third ~~positions~~ position, respectively, by an end-user, the pattern, baseline and line segment having a first, a second and a third ~~dimensions~~ dimension, and a first, a second and a third ~~azimuths~~ azimuth respectively, at line 6.

**Regarding claim 3(e)** “...identifying a fifth position at where the second line segment is located, and detecting a fifth dimension and azimuth of the second line segment ;...” at line 3.

Appropriate correction is required.

***Claim Objections - 37 CFR 1.75(a)***

4. The following is a quotation of 37 CFR 1.75(a):

The specification must conclude with a claim particularly failing to point out and distinctly claim the subject matter which the applicant regards as his invention or discovery.

Claims 12 and 17 are objected to under 37 CFR 1.75(a), as failing to conform to particularly point out and distinctly claim the subject matter which application regards as his invention or discovery.

**Regarding claims 12 and 17**, the phrase "hue tuning" is not a recognized term, and it is not defined by the specification. The precise meaning of the term is unclear. The definition that will be assumed during prosecution will be adjustments or alterations to the coloring of the images or pictures described in the corresponding embodiments.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Regarding claims 12 and 17**, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

**Regarding Claim 12**, the method of claim 11, further comprising the step of: configuring attributes of the second duplication by subjecting the second duplication to transformation, such as mirror reflection and rotations and hue tuning, to generate transformed drawings of similar pictures.

Art Unit: 2609

**Regarding Claim 17**, the system of claim 16, wherein the line segment in the pattern is subject to configuration of attributes, such as mirror reflection and rotation, and hue tuning to generate transformed drawings of similar pictures for the second duplication.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 6-9,10-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Roy (US 5831633).

**Regarding Claim 6**, a system for constructing pictures (“One embodiment for the present invention is the heart of the software product Fractasketch 2.0”), at column 10, line 22), for generating large-scaled drawings of similar objects

Art Unit: 2609

("...which allows interactive creation and colorization of generated images" at column 10, line 26), comprising: a storage module; ("This information may be stored and retrieved from permanent storage.") Figure (1110), column 11, line 24, an interface device serving as an input device to be used by an end-user to input a pattern, a baseline and a targeted line segment; (Figure 11, numeral 1100, "The user defines the templates, choice functions, by direct manipulation with user interface tools, using the keyboard and mouse (1100)), at column 11, line 22, a detecting unit, for detecting and identifying positioning information, including relative positions, dimensions, azimuths and centers of the pattern, baseline and targeted line segment upon inputting the pattern, baseline, and targeted line segment, and storing the positioning information in the storage module; ("This memory contains at least the templates, choice functions, color paths and mixing functions"), at column 11, line 27, ("...these processes will typically provides a default for these inputs") at column 10, line 7, an analyzing unit, for obtaining a relative relationship existing between the pattern and the baseline to be stored in the storage module upon accessing the positioning information stored in the storage module; ("The designer can ignore one or more inputs, making the present invention easier to use...the designer has complete control over the shape and color by overriding the defaults.") at column 10, line 8, ("...this gives immediate on-screen feedback."... "and this feedback allows user to retrieve templates, choice functions, etc.) at column 10, line 46.

**Regarding Claim 7**, the system of claim 6, wherein the pattern includes at least a first line segment, (Figure 5 (a&b) also Figure 6(a-d)), rendering the first duplication to include at least a second line segment due to conformity with the relative relationship ("The memory contains at least the templates (1150) and the choice functions (1160)" at column 11, line 28, (Figure 1200, shows the targeted line segment and baseline portions) and displayed on the interface device (" the snapshot shows in the window...an image with two of its templates in windows A and B") at column 11, line 3.

**Regarding Claim 8**, the system of claim 7, wherein the calculating unit treats the second line segment as a new-targeted line segment, (" For these templates, it uses fixed-point arithmetic to perform the calculations necessary to draw and colorize the image") at column 11, line 38, to generate a second duplication upon accessing the relative position, dimension, azimuth and center of the second line segment ("An optimized turtle graphics package developed by the author is used to calculate the positions of the image components") at column 11, line 40.

**Regarding Claim 9**, a system of claim 8, wherein the calculating unit allows configuration of attributes of the line segment of the second duplication or the object in response to configuration made by the end-user to facilitate advanced processing of the second duplication ("The package avoids calculating the positions of image components that are not visible in the output, ...optimized



routines for finding calculated positions are used in this preferred embodiment”) at column 11, line 43.

**Regarding Claim 10**, a method for constructing pictures, for generating large-scaled drawings of similar objects (“ a technique for designing and drawing a class of highly complex, natural looking or geometric images” at column 4, line 9), comprising the steps of: providing a pattern (“ Figure 3, numeral 300 “shows a template comprising two line segments” at column 6, line 43), a baseline (“ and a baseline” at column 6, line 44), and a targeted line segment (“First, draw a template...second, choose a component of the drawing 130 and replace it by a properly oriented and possibly deformed or transformed copy of the shapes template”), at column 6, line 61, Figure 5(a); analyzing a relative relationship between the pattern and the baseline (“Choosing a component and replacement template is called a choice step and replacing is called a replacement step”), at column 7, line 2, “and the baseline gives the size and orientation of the template”), at column 6, line 44); and generating a first duplication along the targeted line segment (Figure 5(b), “choose a component of the drawing 130 and replace it by a properly oriented and possibly deformed or transformed copy of the shapes template”), at column 6, line 61 having a relative relationship identical to the relative relationship (“properly oriented”), at column 6, line 62, (“the copy is oriented and resized so that the baseline fits exactly on the component 300”), at column 6, line 67, and displaying the first

duplication as a first picture (Figure 10, the various windows of the process are displayed for the end-user or operator).

**Regarding Claim 11**, the method of claim 10, further comprising the steps of: treating each line segment of the first duplication as a new targeted line segment (figures 5(a), 5 (b), the figure shows numeral 300 replaced as a copy of the template and duplicated at figure 5(b); and generating a second duplication along each of the line segments of the first duplication (figures 6(a) and 6(b), these figures point to the positioning of the template being duplicated along the previous duplication), and having a relative relationship identical to the relative relationship and displaying the second duplications as a second picture, (figure 6(b) "...keep choosing components and replacement templates, and doing replacement steps, ...images are obtained with different numbers of replacement steps.") at column 7, line 8.

**Regarding Claim 12**, the method of claim 11, further comprising the step of: configuring attributes of the second duplication by subjecting the second duplication to transformation including mirror reflection and rotation and hue tuning (Figure 6 (a&b), "Figures are shown in different levels of detail. These images are obtained with different numbers of replacement steps,") at column 7, line 13, to generate transformed drawings of similar pictures (Figure 6 describes multiple drawings of a similar picture which includes mirror reflection and rotation and hue tuning.)

**Regarding Claim 13**, the method of claim 11, wherein the plural targeted line segments in the first duplication are treated as plural iterated lines, and the number of the iterated lines that are not subject to subsequent iterative duplication, and the frequency of the number of the iterated lines that are subject to subsequent iterative duplication or alternative iterative duplication may be configured to generate a picture having timing differences, (Figure 6(c&d), and Figure 10, “The results in the shape can be edited by direct manipulation.”) at column 12, line 44.

**Regarding Claim 14**, the method of claim 12, wherein each targeted line segment may be transformed into a new picture by the transformation randomly or functionally (Figure 6 (a-d), “Two suitable parts of a choice function are fixed replacement and random replacement.” at column 8, lines 49, 54. (“The replaced component can be deformed so that it fits exactly with the two components adjacent to it.”) at column 7, line 42. (“A choice function can incorporate randomness as a way to increase a natural appearance.”) at column 8, line 18.

**Regarding Claim 15**, a system for constructing pictures (“One embodiment for the present invention is Fractasketch 2.0” at column 10, line 22), for generating large-scaled drawings of similar objects (“...which allows interactive creation and colorization of generated images” at column 10, line 26), comprising: an interface device (“...the user can open any number of windows on the screen”), at column 10, line 31, figure 10, and system control module

("...limited only by available memory." at column 10, line 32), the interface device serving as an input device to be used by and end-user to input a pattern ("The user defines the templates...by direct manipulations with user interface tools using the keyboard and the mouse (1100)." at column 11, line 22, a baseline and a targeted line segment to generate a duplication, characterized in that : the system control module generates a first duplication analogous to the pattern upon identifying positioning information of and analyzing a relative relationship between the pattern and the baseline, the first duplication being displayed on the interface device, such that a relative relationship between the first duplication and the targeted line segments conforms with the relative relationship between the pattern and the baseline (" the window either shows template or draws the generated image using its choice function...the window whose templates are needed to be drawn are linked to that images window") at column 10, line 34 .

**Regarding Claim 16**, the system of Claim 15, wherein the system control module treats the first duplication as a new-targeted line segment to generate a second duplication analogous to the pattern ("The memory contains at least the templates (1150) and the choice functions (1160)", at column 11, line 28, and displayed on the interface device (" the snapshot shows in the window...an image with two of its templates in windows A and B") at column 11, line 3, such that a relative relationship between the second and first duplications conforms with the relative relationship between the pattern and the baseline ("

The templates, color paths...can be edited interactively, with immediate feedback on the image”) at column 11, line 8.

**Regarding Claim 17**, the system of claim 16, wherein the line segment in the pattern is subject to configuration of attributes, including mirror reflection and rotation, and hue tuning to generate transformed drawings of similar pictures for the second duplication (“The user has graphical tools (1060) to create and edit the templates (1000) and color paths (1020), and its choice function by direct manipulation”) at column 11, line 10.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 3, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Roy (US 5831633) and Kurzweil (US 7098917 B2).

**Regarding Claim 1**, Van Roy teaches, a method for constructing pictures, for generating large-scaled drawings of similar objects (“ a technique for designing and drawing a class of highly complex, natural looking or geometric images”), at column 4, line 9, comprising the steps of: (a) inputting a pattern, a baseline, and a line segment at a first, a second and a third position, respectively, by an

Art Unit: 2609

end-user, the pattern, baseline, and line segment having a first, a second and a third dimension and a first, second and a third azimuth respectively, ("Figure 3 shows a template comprising two line segments (300) and a baseline (310). The baseline (310) gives the size and orientation of the template. The two line segments (300) are the components of the template.") at column 6, line 43, figure 3.

**Regarding Claim 2**, the method of claim 1, wherein the pattern includes at least a first line segment, rendering the first duplication to include at least a second line segment due to conformity with the relative relationship ("Figure 4 shows the result of drawing the template of Figure 3...typically, a component is drawn as a line segment.") at column 6, line 55.

**Regarding Claim 3**, the method of Claim 2, further comprising the steps of: (e) identifying a fifth position where the second line segment is located, and detecting a fifth dimension and azimuth of the second line segment; (Figure 6(a or b), (f) treating the second line segment as a new targeted line segment, and generating a second duplication of the pattern at a sixth position by scaling the pattern with a second ratio and translating the pattern in accordance with the fifth position, dimension, azimuth of the second line segment using the relative relationship between the pattern and the baseline as a reference, such that the second duplication and the second line segment conform with the relative relationship between the pattern and the baseline; (Figure 5 & 6, "...keep choosing components and replacement templates until reaching the desired

Art Unit: 2609

level of detail in the image...these images, 6(a-d), are shown with different numbers of replacement steps.”) at column 7, line 8, and (g) displaying the second duplication at the sixth position as a second picture for examination of the end-user (Figure 10 points to the display of multiple pictures of duplications starting with the transformation of the pattern, baseline and targeted line segment.)

**Regarding Claim 4**, the method of claim 3, wherein the second line segment is an iterated line serving as a targeted line segment to be used in the subsequent iterative duplication (Figure 5(b) and 6(a), “Figures 6(a-d) show several generated shapes at different levels of detail, drawn with the drawing process applied to the template of Figure 3 using recursive replacement.”) at column 4, line 45.

**Regarding Claim 5**, the method of claim 4, further comprising the steps of: (h) treating the plural line segments generated by repeating steps (e) and (f) as plural iterated lines and generating different pictures using the plural iterated lines, (Figures 6(c&d), “...the replacement step...deforms or transforms the template.”) at column 7, line 19.

Van Roy teaches inputting the pattern, baseline and line segment at a first, second and third position, respectively by an end-user, the pattern, baseline and line segment having a first, second, and third dimension and azimuth respectively.

Van Roy does not teach analyzing a relative relationship existing between the pattern and the baseline in accordance with the positions, dimensions and azimuths of the pattern and baseline, generating a first duplication at a fourth position through iterative duplication, by scaling the pattern with a first ratio and then translating the pattern in accordance with the second position, dimension and azimuth of the line segment using the relative relationship between the pattern and the baseline as a reference, such that the first duplication and the targeted line segment conform with the relative relationship between the pattern and the baseline; and displaying the first duplication at the fourth position as a first picture for examination of the end-user.

In the same field of constructing pictures of large scaled drawings of similar objects, **regarding claim 1**, Kurzweil teaches, (b) analyzing a relative relationship existing between the pattern and the baseline in accordance with the positions, dimensions, and azimuths of the pattern and baseline; (" Process 56 determines if the counter equals the number of generations, n, requested by the user or the specified amount randomly chosen by the system 10), at column 3, line 53, (c) generating a first duplication at a fourth position through iterative duplication, by scaling the pattern with a first ratio and then translating the pattern in accordance with the second position, dimension and azimuth of the line segment using the relative relationship between the pattern and the baseline as a reference, such that the first duplication and the targeted



line segment conform with the relative relationship between the pattern and the baseline; (“ Process 56 increments the counter by one. Process 56 iteratively replaces the generator elements for each generation of the image element with fractal generator 81 until the counter equals n.”) at column 3, line 64 and (d) displaying the first duplication at the fourth position as a first picture for examination of the end-user.(“ Process 50 displays 58 the stored image into display 32.”) at column 4, line 4.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify inputting the pattern, baseline and line segment at a first, second and third position, respectively by an end-user, the pattern, baseline and line segment having a first, second, and third dimension and azimuth respectively as taught by Van Roy to include the analysis of a relative relationship existing between the pattern and the baseline in accordance with the positions, dimensions, and azimuths of the pattern and baseline; generation of a first duplication at a fourth position through iterative duplication, by scaling the pattern with a first ratio and then translating the pattern in accordance with the second position, dimension and azimuth of the line segment using the relative relationship between the pattern and the baseline as a reference, such that the first duplication and the targeted line segment conform with the relative relationship between the pattern and the baseline; and displaying the first duplication at the fourth position as a first

Art Unit: 2609

picture for examination of the end-user as taught by Kurzweil to add stronger limitations to the concept of choice replacement, colorization, and drafting to further reduce user-analysis and increase attention to focus on incorporated appearances of the picture or image. The addition of Kurzweil's analysis, generation and display also increases the manipulation of the pattern, baseline and line segments at a first, second and a third position, dimension and azimuth respectively, for more efficient editing, accuracy, and precision.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mia M. Thomas whose telephone number is 571-270-1583. The examiner can normally be reached on Monday-Friday 7:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2609

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mia M Thomas  
Examiner  
Art Unit 2609

*MMT*



BRIAN WERNER  
SUPERVISORY PATENT EXAMINER